

VIRGINIA WILDLIFE

FEBRUARY 2007

TWO DOLLARS





J. Carlton Courter, III

Director



Thanks to the generosity of one Virginia family, the Department is continuing its efforts to conserve valuable habitat for wildlife and for outdoor recreation. Brothers John and Jack Fray have long been interested in permanently protecting 550 acres of pristine mountain land that was part of a larger parcel that their father purchased back in the 1940s. The Fray Tract is strategically located between the Department's Rapidan Wildlife Management Area (WMA) on the west and the Shenandoah National Park on the north and east. The tract remains untouched as it was when it was acquired 60 years ago.

It was the Fray brothers strong conservation ethic and desire to allow people to hunt, fish, hike and enjoy the land as they have over the years that lead to a conservation agreement between the Frays, the Wildlife Foundation of Virginia (WFV) and the Virginia Land Conservation Foundation (VLCF). Funding for the acquisition came from a charitable contribution by the Fray families and a VLCF grant to the WFV. The WFV guided the family through the conservation easement process. The property was then given to the Virginia Department of Game and Inland Fisheries to be included,

and managed, as part of the Rapidan WMA.

Recently I had the opportunity to join the family and their many friends at the Madison County firehouse to celebrate the property transfer. I was impressed by the dedication of so many people and organizations to make this happen. The generosity of John and Jack Fray and their family will truly leave a legacy for all Virginians to enjoy.

The old saying holds true, "Land: they're not making any more of it." This donation is beyond a dollar value in terms of conservation for future generations and sustaining Virginia's rich hunting and fishing heritage. If you are interested in donating land or establishing a permanent conservation easement to help protect Virginia's wildlife and natural resources, contact me at 804-367-9231.

Protecting habitat and establishing dedicated funding for wildlife conservation are key elements defined in Virginia's Wildlife Action Plan featured in this issue. I hope that you take the time to read this important information and join our team as we work to be more conservation minded and Be Wild, Live Wild, and Grow Wild!



John Fray (center) and his brother Jack Fray (left), holding his grandson, are surrounded by their extended family during a special dedication ceremony which was held at the Madison County Firehouse last December.

Mission Statement

To manage Virginia's wildlife and inland fish to maintain optimum populations of all species to serve the needs of the Commonwealth; to provide opportunity for all to enjoy wildlife, inland fish, boating and related outdoor recreation; to promote safety for persons and property in connection with boating, hunting and fishing.

Dedicated to the Conservation of Virginia's Wildlife and Natural Resources

Commonwealth of Virginia
Timothy M. Kaine, Governor

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About the cover:

Widespread use of DDT following World War II decimated populations of many of Virginia's top predators, including the bald eagle. Thanks to sound wildlife management practices and a national effort to save them, eagles are once again soaring.

Today, in spite of our best efforts, much work still needs to be done. Over 100 wildlife species have declined to levels so low that agencies had to step in and list them as threatened or endangered to prevent these species from disappearing from the landscape. The costs of recovery increase and the options for collaborating with partners and neighbors often decrease. Over 900 species of wildlife, and the habitats that support them, are declining in numbers across the Commonwealth. Without new sources of funding and a well thought out plan, the future of Virginia's diverse wildlife resources are in jeopardy.

As you will learn in this issue of *Virginia Wildlife*, the Virginia Wildlife Action Plan provides a common vision for wildlife conservation across the Commonwealth, identifying the important steps that we must all take to keep common species common and to prevent further decline, or possible extinction, of imperiled species.

Think you can't make a difference? You can! Be wild and work with your local officials and in your local communities to conserve Virginia's wildlife resources. To learn more about the Virginia Wildlife Action Plan and how to get involved visit: www.BewildVirginia.org.

Cover photo: bald eagles ©Jack Mills. Back cover photo: red-bellied woodpecker ©Gregory J. Pels

VIRGINIA WILDLIFE

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GOING PRIMITIVE

As an avid archer, Kevin Baker learned at an early age that the latest and greatest in hunting gear is not always the best way to hone one's outdoor skills.

photos and story by Gail Brown

Don't move, son." Limbs tightening, Hunter froze at his father's command. This was a test he could not fail, a huskanaw of sorts, although he was too young to grasp the concept of coming of age. Instincts told him a buck was near, but he did

not look; he did not move. The 5-year-old's body often betrayed him in life's other arenas, his untimely movements breaking the silences so coveted by adults. The edge of the blind cut into his legs. His arms, trapped at his side, begged for release.

The buck owned the moment. Commanding respect, he surveyed his kingdom casually, his ownership inherited through bloodlines dating back to primitive time. Carved in every fiber of his being, he followed more than chose his predetermined path, well out of reach of Kevin's bow, Snakelore. Deep in the grip of alien dangers, not unlike a Powhatan werowance of centuries past, the buck's senses failed to alert him to minds that plotted, eyes that fol-

lowed his forage through his woods. Still, the buck possessed powers and skills denied to man. Events of this day were yet to be settled; the contest far from decided.

"Don't move, son."

A child of the Chesapeake, at Hunter's age Kevin spent long days exploring the woods and shorelines, searching for arrowheads, playing out dreams of life as a Powhatan warrior. Leatherback turtles, rugged watermen, and skipjacks breaking the horizon formed the foundation of his earliest memories. Over time, relying too often on the resources of modern life, he lost his inner compass, growing more and more dissatisfied with each hunt, each easy victory that technology bestowed. Kevin conquered his restlessness only when he reestablished his bond with the natural world and began to hunt like the Chickahominy, the Pamunkey and the Powhatan.

Accepting nature's gifts, Kevin creates arrows from shafts of river cane, relying on animal-based glue and sinew to secure the fletching to the arrow, the arrowhead to the shaft. With primitive tools of stone and antler, Kevin tillers staves of hickory and locust to form bows like Snakelore. It was only when he shed the traps of the 20th century that Kevin discovered again the strength of his mind and body. Now he finds the joy of the hunt lies not in the kill but rather in the challenge. As Hunter grows older, Kevin believes his son will embrace compound bows and store-bought arrows—



Making primitive tools, bows and arrows has helped Kevin understand and appreciate the resourcefulness of early Native Americans.

their design ensures rapid success. In the future, straddling both worlds, Hunter will choose which path he will follow. But not today. Today they hunt as Powhatan.

"Don't move."

The wind shifted. Hunter tracked the buck in his mind—a child's attempt to ease the ache in his body. He hadn't time to adjust, to ready himself for the challenge. In his mind's eye he saw his first bow, Simplistic Grace, a sinew-backed hickory recurve bow his father decorated with a poem



and the image of a buck. He liked having the bow. He didn't yet recognize it for what it was—an enduring message of love from father to son. Hunter practiced at home with a smaller bow, one more suited to his size, and he practiced with relatives using a compound bow, too. His success with the latter could not be ignored; it sated a primal need to conquer. Yet, there was no denying the emotion that Hunter felt when he started a fire with only sticks and leaves. He recognized the feeling of pride as it filled his heart. The subtle pull of history escaped his notice.

The buck rose and faded in and out through the tree line, his breath vis-

Above: Once you have a usable spall, it must be thinned and shaped into an arrowhead. Left: Kevin hopes his son, Hunter, now in third grade, will learn to appreciate and respect nature.

ible in Hunter's peripheral vision before his antlers came into view. Something—a raptor's screech, a stirring of the wind—alerted the buck to their presence. Possessed by some primal instinct, he turned his massive head toward the blind and reacted. Kevin's arrow sped toward his quarry. The hunt was over. Hunter looked at his father. Kevin reached out to hold him.

"I'm proud of you, son. You did your part. Let's go home." □

Gail Brown is a retired principal for Chesterfield County Public Schools. She is a lifelong learner and educator, and now helps to promote project-based environmental programs that teach science standards, promote core values, and provide exciting educational experiences for the entire community through her writing, photography and Virginia Naturally articles that appear in Virginia Wildlife.

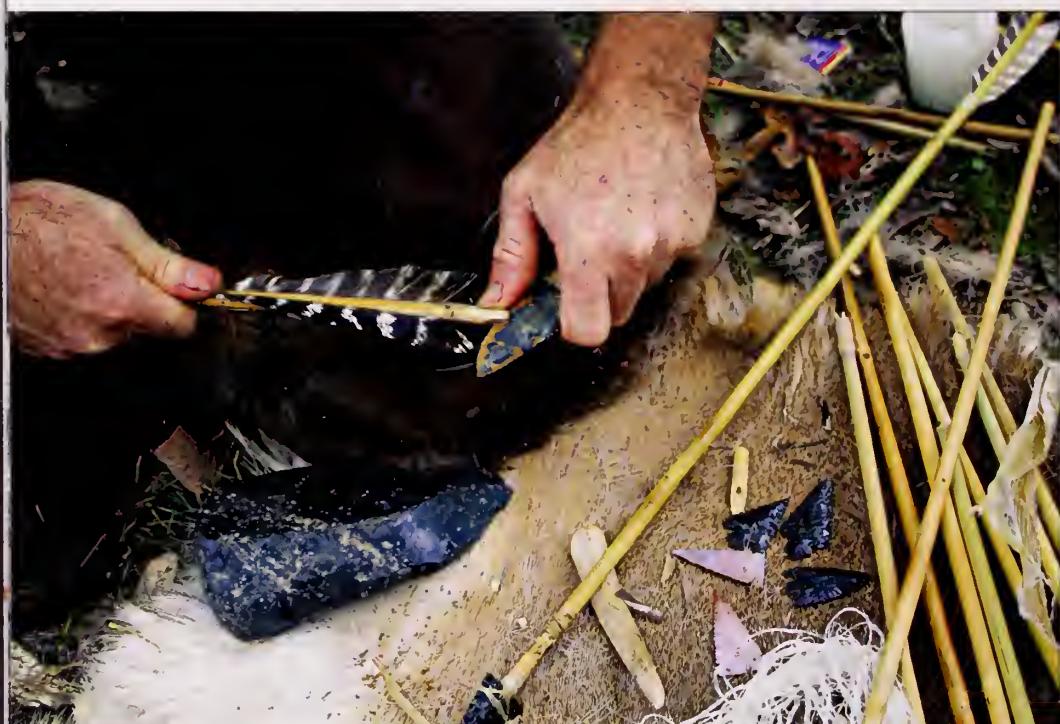
THE ARROW MAKER

Kevin Baker considers himself a fortunate man. Fortunate to have spent his childhood days exploring Virginia's woodlands and waterways; more fortunate still to be able to support his family creating unique wooden signs, custom tree houses, and other creations desired by his customers. Like all of us with family and job responsibilities, time spent hunting and exploring is limited—but the restorative powers of nature are timeless, as is the challenge of hunting with the primitive bows and arrows he creates.

Kevin's interest in the history of Jamestown and Native American cultures forms the foundation of his desire to hone the skills needed to make and use primitive tools, arrows and arrowheads. While glad to share his knowledge, he stresses that there are many different ways to make arrows and arrowheads, all of which are correct. It's a creative process, and like all such experiences you learn and change as you go. All he can say for certain is, "This is how I made these. Next time, it may be an entirely different story."

MAKING ARROWS

1. Gather river cane and bundle the cane in groups of a dozen or so stalks. Let the cane dry for about six weeks.
2. Scrape the growth nodes smooth; bends can be removed by using a heat source (candle) and applying pressure with your thumbs.
3. Carve a hard wood insert to plug the point end.
4. Fit and glue the insert into the river cane and wrap the cane section with sinew to keep it from splitting.
5. Carve the socket or notch for the point end. Fit and glue (with hide glue) the arrowhead into the hard-wood shaft. Wrap the arrowhead to the shaft with sinew.
6. Strip primary feathers from same wing. Cut to length.
7. Smear hide glue over shaft and let it set until it is tacky.



KING PROCESS



8. Starting with the nock end, position the feathers around the shaft evenly. While each feather can be wrapped separately, Kevin prefers to wrap all three to the shaft with the same piece of sinew. While more difficult to accomplish, this works best as the feathers lie tighter to the shaft. Remember: there is no one way to do this. Trial and error will help you find the method best for you.



9. After the feathers at the nock end are secure, pull each vane toward the point end at a slight angle; wrap them to the shaft. Whether you angle the feathers to the right or the left is determined by whether you used a right wing or a left wing prime feather. What is most important is that all of the feathers are from the same wing. This ensures faster stability and quiet flight. If the feathers are not tight they will make a whistling noise in flight which could alert your prey.



10. After the feathers are dry on the shaft, cut the nock into the shaft. Position the nock so that when the arrow is on the string one vane is up, one is down, and the other is pointed away from the bow.



MAKING ARROWHEADS



STAGE ONE: Hard Hammer Percussion

In creating an arrowhead the first process is to strike the core stone to create a shard or spall. To do so you have to first grind a platform less than 90 degrees using another stone. This is the most important step in all three stages. In these pictures the arrowhead is made from obsidian.

Strike the platform with a hammer stone in a sharp circular motion.

Your goal is to break off an appropriate size spall to form into an arrowhead or point.

STAGE TWO:

Soft Hammer Percussion

Once you have the spall it must be thinned and shaped by using soft-hammer percussion. Kevin uses an antler billet for shaping in this stage.

Again, it is important to grind a platform which controls the angle, length, and depth of the shard being removed.

STAGE THREE:

Pressure Flaking

After the thinning process, further refine the spall into an arrowhead by pressure flaking. Pressure can be applied to the platform by pushing material from the arrowhead creating sharp serrated flakes.

Always recycling, Kevin makes arrowheads from many different materials. While obsidian is preferred, arrowheads can be made from old TV tubes, a Clorox bottle, or porcelain from a discarded commode.



The Up



*The "eyes"
have it.*

*The New River is
the place to go
for top walleye
action.*

Upper New's Mystery Fish

story and photos by Bruce Ingram

As a lifelong Virginia angler, I have come to some general conclusions about the truth telling abilities of my angling brethren in the Old Dominion. For example, trout enthusiasts seem to be the most *honest*, (although coupling that word with *angler* is always risky business) fairly willing to share their most productive fly patterns of the moment and to divulge the size of the fish they are catching—though not much else of value.

Bass fishermen will usually tell the truth about what they are using to catch largemouths and smallmouths, but rarely where or when they are doing so, nor will they reveal the size. Concerning size, striper aficionados will tell the truth if they are not catching any or only small fish but rarely will confess to hooking large specimens.

Commonwealth walleye anglers, on the other hand, will not only *not* tell where, when or how they are catching marble-eyes, but they will also deny that they are catching walleyes...or that the river or lake they are on contains walleyes...or that they are in fact fishermen at all.

All this secrecy among the state's walleye fraternity has left a void concerning where to go in the state for this member of the perch family. Mike Smith, of Willis, guides on the upper New above Claytor and operates Greasy Creek Outfitters, is an exceptional walleye angler. Smith attempts to explain the mystique and the mystery involving walleyes.

"You know, in the over 30 years I've fished on the upper New, I've never met a 'walleye fisherman,'" says



With unparalleled beauty and easy access, the New River offers some of the best river walleye action in the entire South.

Smith. "The closest I've come to getting the truth is when I've asked a guy what he's fishing for and he says 'whatever bites.' Of course, I know these good ol' boys are trolling for walleye, working the same water, the same time of the year, and with the same type of plugs as my grandfather did when he brought me along as a boy.

"Those walleye have been here since the New joined with the Ohio eons ago, but you wouldn't know it from talking with these guys. Oh, they might tell you that they lucked into one now and then. As far as the mystique goes, I think it's partly because how elusive and difficult to catch the fish can be, and partly because walleye make such good table fare that many local anglers hold them in higher esteem than other fish."

How-to Tips

Smith also offers these tips on winter and spring angling.

"The most important factor to having success winter walleye fishing is having good electronics and knowing how to read them," says Smith. "The key is to locate stacked fish in their wintering holes, anywhere from depths of 8 to 20 feet. The fish move around a lot, but generally can be found in bunches, if you have a good depth finder.

"When the water temperature reaches the mid 40s, they will start to run and can be found staged beneath rapids in the river and in the vicinity of Allisonia (lake run fish). Walleye seem to be most active in the upper 40s and will spawn by the time the water temperature exceeds the 50 degree mark in late March."

A Walleye Timeline on the New River

- Anecdotal records of walleyes caught in the early 1900s.
- Claytor Lake formed in 1939.
- Walleye stocked in Claytor until 1946 and again from 1974 to 1996.
- Walleye stocked in New above Claytor and in Byllesby Reservoir in 1994 through 1996.
- Stockings halted in 1997 when a Virginia Tech walleye genetics and movement research study reveals that a genetically unique walleye population dwells in the upper New.
- The study also reveals three major walleye spawning sites: Allisonia, Foster Falls, and Ivanhoe Riffles below Buck Dam.
- As a result of the study, the Department begins a walleye restoration project to preserve and enhance this unique stock.
- In 2000 and 2002, hatchery mortality results in no walleyes released.
- In 2001, 23 of 28 female walleyes that Department captures are New River stock. From them, 500,000 walleye fry and 10,000 fingerlings are stocked at Foster Falls.
- In 2003, a regulation was put into effect that no walleye less than 20 inches can be creel from Claytor Lake or the New River upstream from Claytor.
- Also, in 2003, a cooperative agreement is reached with the West Virginia Division of Natural Resources, and the DNR begins to raise New River walleye for Virginia from eggs and fry supplied by Virginia.
- In 2004, 156,200 walleye fingerlings were stocked from Claytor Lake to Fries Dam.
- In 2005, 90,000 walleye fingerlings were stocked from Claytor Lake to Fries Dam.

The most effective tactic for winter fishing, continues Smith, is to locate the fish and then anchor or drift across them, meticulously working a deer hair or plastic jig, sometimes tipped with a minnow or nightcrawler. The bite is very subtle and takes a lot of practice to detect. The best rods are 6- to 7-foot medium action with soft tips, and with the reels spooled with 8-pound mono.

Smith's favorite way to target walleye in the spring is to troll or cast hard jerkbaits of various sizes and colors, depending on the conditions, in the staging areas. This is usually most effective at night, as walleye are low light condition feeders, but since winter days are often cloudy and overcast, the daytime period can yield nice catches as well.

During the spring of 2004, Smith and his clients registered four citation walleye (fish going at least 5 pounds or 25 inches). Marble-eyes will hit spinnerbaits and crankbaits in the summer when the water is high and turbid, but, generally, this time period is not a good one to catch these perch. The biggest walleye caught on one of Smith's trips...Roanoker John Flick registered a 13.9-pound 32.5-inch length, 19-inch girth behemoth.

The Biological Perspective

Joe Williams, a Virginia Department of Game and Inland Fisheries biologist at the Blacksburg office, has extensively studied this game fish. In this regard, one of the most exciting developments is that the Department is conducting a walleye restoration project to preserve the unique stock of walleye that exists on the upper New. Three reasons exist for this project.

"Any genetically unique stock of any species should be preserved for the same reasons we do not want any species as a whole to become extinct," says Williams. "Secondly, this unique stock seems to be growing larger than the other genetic walleye stocks found in the river. Genetic samplings of the two previous state record walleye and a couple of larger than average sampled walleye indicate that they were of the New River stock population.

"And, thirdly, for anglers we want to develop an extremely abundant walleye fishery with many large adults."

Toward the implementation of the walleye restoration, since 2000 the Department has been collecting





Opposite page: Fishing guide Mike Smith displays this fine 25-inch walleye that he caught in the New River in March to Forest Pressnell. Above: Before the spawn, the New's walleye often run upstream to major rapids, such as Foster Falls in the background. Left: Jerk-baits in a variety of colors and sizes are a must when pursuing walleye in the New. Minnows are a favorite wintertime food of walleye, so it's a good idea to have baits that resemble them in size and color.



spawning walleye in March and April, removing then hatching and growing the young fish then, finally, reintroducing fingerlings back into the upper New River. Specifically, these New River stock walleye are being released into a 22-mile section between Claytor Lake and Buck Dam.

Williams relates that the Department is also stocking Claytor, the reach between Buck and Byllesby and in the river above Byllesby.

"It's important to note that if we did not collect the adults, we would not have any walleye to stock since we will only use the New River stock fish," emphasizes the biologist.

Williams emphasizes that this stocking program is essential at present because although there is some evidence of natural reproduction taking place, it is not enough to sustain a healthy fishery. Fishing pressure has also increased, as more and more Old Dominion anglers have learned how to catch these fish and how good they are to eat. Walleye fishermen, unlike bass and trout anglers, often do not release their catch.

Because of the catch and keep tendencies, as well as a desire to protect spawning females, the Department instituted a 20-inch size limit on January 1, 2003 for the New River above Claytor and the lake itself. The regulation should result in increased natural reproduction and many more large walleye in Claytor and the New River. Releases of New River stock fingerlings will continue as well.

Joe Williams raves about the potential of this fishery.

"If our plans and efforts can successfully come together, the New River walleye fishery has the potential to be the premier river walleye fishery in Virginia with respect to overall number and size of trophy walleye produced." □

Bruce Ingram is the author of the following books: "The James River Guide," "The New River Guide" and "The Shenandoah/Rappahannock Rivers Guide." To obtain information on purchasing a book, contact Ingram at be_ingram@juno.com.

Additional Information

For guided trips, contact Mike Smith at www.greasycreekoutfitters.com, or 540-789-7811.

For fisheries management information, contact Joe Williams at Joe.Williams@dgif.virginia.gov, or 540-961-8304.



What challenges has wildlife in the Commonwealth faced since the first English settlers arrived 400 years ago?

by Jeff Trollinger

When the *Godspeed*, *Susan Constant* and *Discovery* arrived April 26, 1607, at Virginia, the Commonwealth was a much different place. First of all, dense forests covered most of the land. Fish and oysters were so plentiful in the Chesapeake Bay, you could fish by sword and scoop up what you wanted. Native American tribes existed in small gatherings throughout the entire area and only changed the landscape slightly. Tribes such as the Rappahannock, Wicomico, Nansemond, Chesapeake, Accomac, Meherrin and Nottoway (who were

Iroquois), Appomattoc, Kecoughtan, Mattaponis, Powhatan and Monacan (who were Sioux) are all names that we associate mainly with places now.

When John Smith and Captain Christopher Newport, of the *Susan Constant*, began setting up the new settlement of "James Towne," the animals that existed throughout Virginia included many that are now gone. Several were described that had never been seen before. In a description by William Strachey, Secretary of the Virginia Company (1610), the Aroughcoune was described as something akin to a badger, tailed



©Bill Lea

like a fox, with a gray and black color that lived in trees much like a squirrel. They were described as excellent eating. This was, of course, our raccoon, that the Europeans had never seen before. The "Oppusum" was described as being pretty and as big as a beagle with a grey color, with a head like swine, and ears, feet and tail like a rat. Strachey used many of the writings of John Smith and others to describe the settlement at James Towne and the area of Virginia in his writings, so the early flavor of their experience is captured in great detail.

While the struggles of the early settlers were many, predators, Indians (as they were then called) and disease were the main concerns. Wolves, lyons and bears were the main threats perceived by Strachey and John Smith. While the wolves of Jamestown were described at the time as not much larger than English foxes, they were apparently quite common; so common in fact that they were considered a danger to the population and bounties were enacted by the Grand Assembly in 1632. Given the location of Jamestown, this description could refer to the smaller red wolf which is currently being reintroduced into eastern North Carolina. The gray wolf was also known to exist across most of Virginia. As a result of bounties and other predator control programs of the 1800s, the last wolf was killed in Virginia, according to Donald Linzey in the *Mammals of Virginia*, in the winter of 1909-10 in Tazewell. Records show, however, that wolves existed across western and central Virginia until well into the late 1800s as one was reportedly

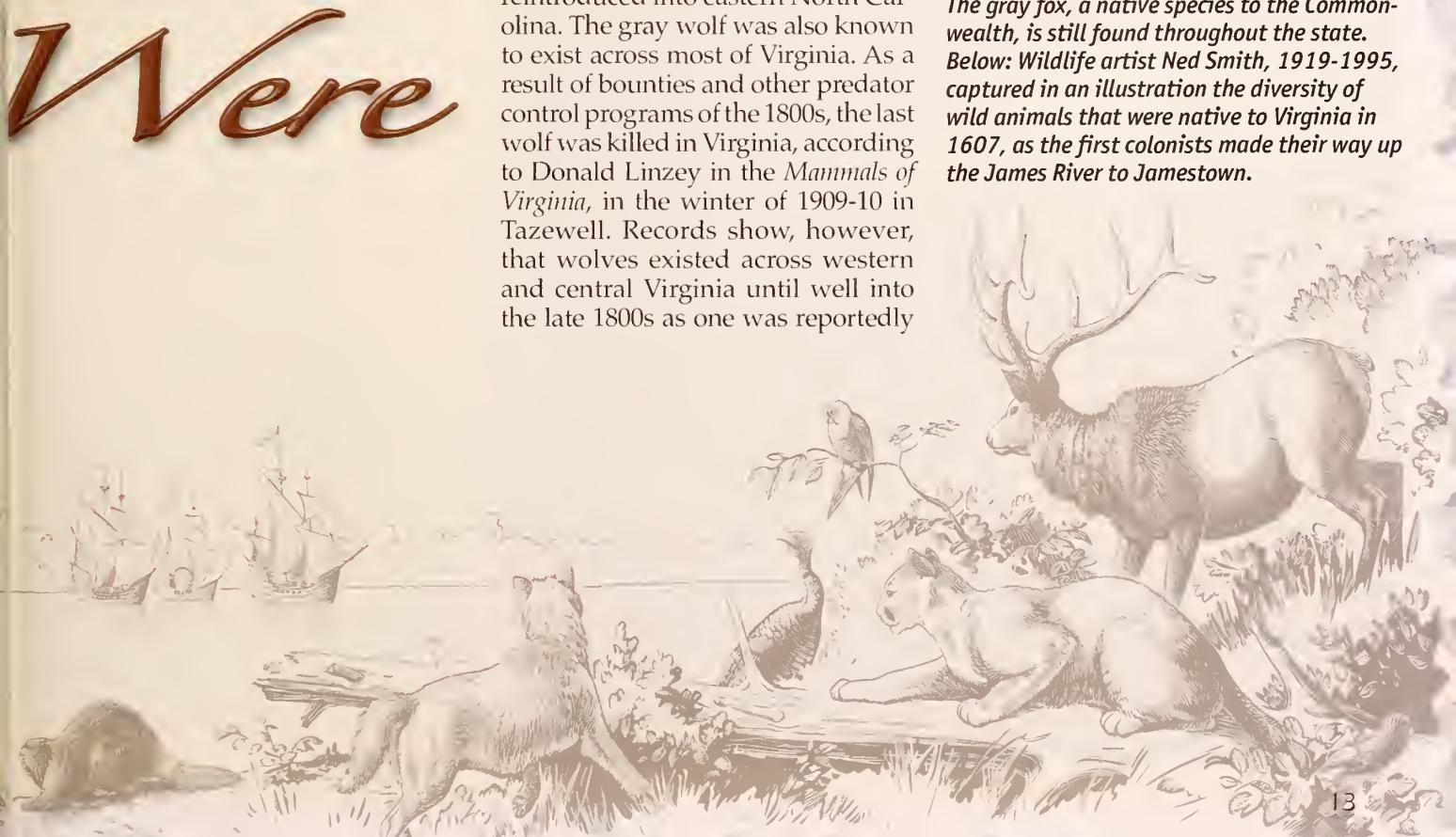
killed in Powhatan County, southwest of Richmond, in 1901.

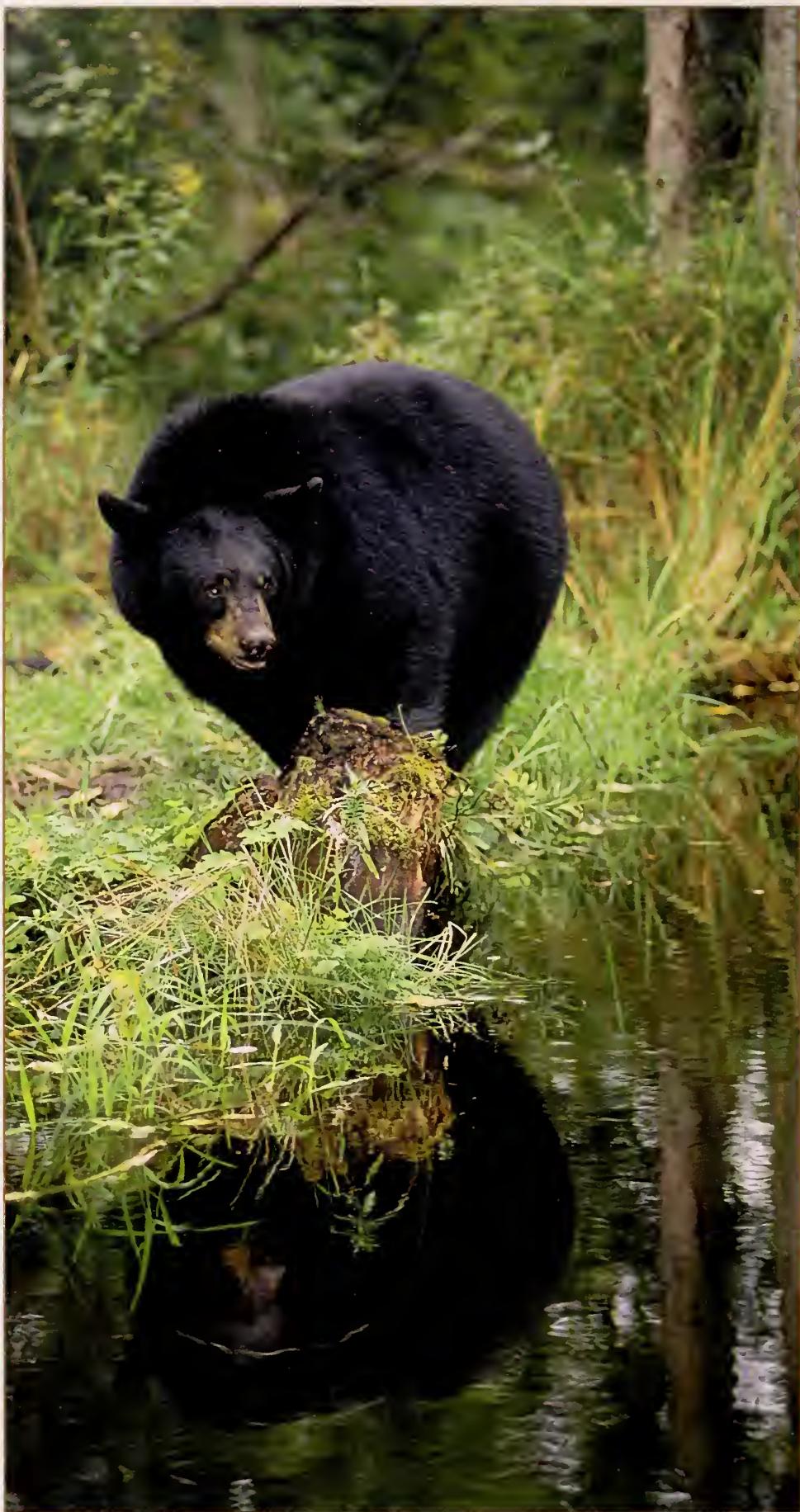
Lyons, or mountain lions (also known as cougars, panthers, painters or puma) were never common in eastern Virginia, though the Native Americans traded with more western tribes for cat parts, claws, skins, etc. The one exception to this is that large cats were documented as late as 1925 in the Dismal Swamp area of southeastern Virginia and northeastern North Carolina. Officially the last cougar was killed in Virginia in 1882 in Washington County (southwest Virginia) and in 1887 in West Virginia. While predator control programs



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The cougar and elk were native species, but are no longer found wild in Virginia. Above: The gray fox, a native species to the Commonwealth, is still found throughout the state. Below: Wildlife artist Ned Smith, 1919-1995, captured in an illustration the diversity of wild animals that were native to Virginia in 1607, as the first colonists made their way up the James River to Jamestown.





had some impact on the extirpation of the cougar from Virginia, the loss of the forest and white-tailed deer were the main causes of its decline. Without habitat and its main prey, the cougar could not exist. Interestingly, over the past two decades, with federal protection of eastern populations and limited hunting of western populations, western cougars are beginning to move east. Already Iowa, Minnesota, Michigan, Missouri, Illinois and several eastern Canadian provinces are confirming cougar sightings in their states/provinces. This is not surprising given that farmland is being reclaimed by forest in many of these areas and the white-tailed deer population is now significantly higher than it was at the time Jamestown was established.

Bears have always occurred in Virginia. While numbers decreased significantly during the late 19th and early part of the 20th century, there are now healthy populations across western Virginia and in the Great Dismal Swamp National Wildlife Refuge. Bear reproduction is so healthy in the Swamp and in the Shenandoah National Park that they regularly move out into adjacent areas to establish new territories each spring. Bear populations increased at a rate of approximately 6 percent per year from 1994–2004 according to Department biologists. This means the current population of Virginia is somewhere near 6,200 bears statewide. An interesting fact about bears is that they were apparently the favorite meat among the Native Americans of eastern Virginia. Strachey and John Smith acknowledged this when they reported that the "Indians hunted them most greedily, for they love them above all other flesh." Strachey described the taste as being as "good as the flesh of a calf two years old."

Black bears do not roam as freely in Virginia as they once did back in 1607. Despite habitat loss, healthy populations of black bears still thrive in the western and southeastern part of the state.

©Bill Lea

Otter, beaver, fox, polecat (i.e. skunk), mink and turkey were all common in the area of Jamestown in the 1600s. Among the mammals that once occurred in Virginia that are now gone were the bison, elk, porcupine, fisher and marten. Of these five, the marten and porcupine were never common. There is some evidence that porcupine may be expanding their current range down from Pennsylvania into western Maryland and northern Virginia. The fisher was reintroduced by West Virginia DNR personnel in the 1960s and late 70s. These were confirmed to be breeding in West Virginia during 1980 and if successful, may in time, expand into extreme western Virginia.

There is some discussion about what eastern bison looked like. Some described it similar to the Plains bison of today, but one description by M. Garretson, of the New York Zoological Society in 1938, described an animal much more massive than the Plains bison, almost entirely black with only a small amount of white around the mouth and eyes. In addition, it was conspicuous by the lack of a large hump over the shoulders, making the animal much more "well-proportioned" as he put it. Another report in a 1944 copy of the Journal of Mammalogy reported that eastern bison were almost indistinguishable

from the Plains bison. Regardless of its appearance, the last bison in Virginia were shot in the mid 1790s and were completely gone east of the Mississippi by 1835. East of the Allegheny Mountains in Virginia there are four Buffalo Gaps, one Buffalo Run, one Buffalo River, two Buffalo Ridges, one Buffalo Hill, one Buffalo Branch, seven Buffalo Creeks, two Buffalo Springs, one Buffalo Station, one Buffalo Forge, one Buffalo Mills, and one Buffalo Ford; a testament to their presence in the past.

Elk are an issue of great controversy today. Kentucky, Tennessee, West Virginia and Pennsylvania have all either experimented with or implemented elk reintroduction programs in their states. Virginia has been most influenced by the Kentucky reintroduction because of the release location and shear numbers of animals being released. Kentucky conducted the first reintroduction of 7 elk just 27 miles from the Virginia border in 1997. After a total of 1,550 elk were released in eastern Kentucky, the herd has now grown to some 5,000 elk and is expected to reach the population goal of 7,400, 11 years ahead of schedule. Elk were common in the central, northern and western parts of Virginia at the time of Jamestown. Thomas Jefferson reported in 1781 that "in Virginia the elk has abounded much, and [still]

exists in smaller numbers." By 1854 & 55 the last wild elk were removed from Clarke County. The absence was a short one however, as Virginia imported approximately 150 elk from Yellowstone National Park in 1917. These were released in Bland County, the Roanoke-Blacksburg area, Princess Anne (now Virginia Beach), Warren and Washington counties. The releases in western Virginia were apparently successful and most of these populations, including a later release in Bedford County, remained until the early 1970s. At this point, released white-tailed deer introduced a fatal nematode parasite into the remaining elk herds and they were gone by 1974.

Amazingly, this brings us to one of the most impressive stories of wildlife reintroduction, the white-tailed deer. Overhunting and habitat destruction nearly extirpated white-tailed deer from Virginia by 1925. In an effort to reestablish a healthy population, over 1,800 deer from North Carolina, Wisconsin, Michigan, Pennsylvania, Florida and other places were released across the Commonwealth from 1930 to 1950. There are now approximately 1,000,000 deer across Virginia and many people consider them a yard nuisance.

The history of wild turkey in Virginia is similar to that of the white-tailed deer, though it is not nearly as



North American fisher ©John R. Ford



prolific. Otter, though never common, were also reintroduced in 1988 along the Cowpasture River to reestablish populations west of the Blue Ridge. Populations have since been steadily increasing in certain locations around the state.

No discussion of wildlife in Virginia would be complete without a review of the history of the bald eagle. Eagles were fairly common in Virginia around the Chesapeake Bay in the early 1600s. By the early 1900s, eagle populations were decreasing due to hunting and some loss of habitat. By 1977, there were only 33 pairs left nesting in Virginia that produced 18 young. This low productivity was due predominantly to the effects of the pesticide DDT on egg shell strength. In 2004, 433 pairs nested in Virginia, fledging 611 young, and the Chesapeake Bay supports more active nests than any other place east of the Mississippi with the possible exception of Florida.

One species that has established itself in the Commonwealth, of its own accord, is the coyote. As recently as 1950, coyotes were not listed as a Virginia species. However, between human introductions and easterly emigration across the continental U.S., this canine now occurs statewide. This nuisance species has become so prevalent that it is considered to be at least partially responsible for a significant reduction in sheep production in Virginia. One interesting fact about this animal is that it is extremely adaptable and is becoming more common in suburban neighborhoods. Two little known facts about this species are that one of its favorite, easy meals is domestic cats and where the coyote moves in, the red fox moves out. No one is completely sure of the dynamics causing the latter.

While many species, like the buffalo, have disappeared from Virginia, the coyote has introduced itself into Virginia over the last 20 years. They now can be found statewide.

continued on page 25

buffalo by Ken Conger



coyote ©Bill Lea



Be Wild

VIRGINIA

VIRGINIA'S WILDLIFE ACTION PLAN

Humankind has not woven the web of life.

We are but one thread within it.

Whatever we do to the web,
we do to ourselves.

Chief Seattle



TOP WILDLIFE CONSERVATION ISSUES IN VIRGINIA

- Loss of wildlife habitat to development
- Poor air and water quality due to pollution and sedimentation.
- Lack of funding for conservation programs
- Lack of public conservation ethic
- Conflicts between wildlife and humans
- Invasive and non-native plants and animals
- Need for better coordination between conservation partners



VIRGINIA

Where Mountains Give Way to the Sea

From dazzling sunrises over the Atlantic coast to glowing sunsets behind its western mountains, Virginia is a place of undeniable natural beauty. An extraordinary variety of wildlife lives within its borders, as its mid-Atlantic location supports species from both southern and northern climates. This results in a wide range of wildlife habitats from Virginia's mountains, forests, freshwater streams and caves, to its fields, marshes, tidal bays and beaches.

Do you remember the first time you saw the ocean and watched a tiny shorebird dart with the waves, held a firefly in your hand as its light flicked on and off, or heard the hoot of an owl or chorus of frogs? These are only a few of the magical experiences

that Virginia's wildlife has to offer—experiences we've assumed will be there to share with generations to come.

Unfortunately, that may not be the case. Pressures on our land, water and air are destroying Virginia's wildlife habitats and threatening the species that depend on them. If we don't act now to protect our wildlife, we stand to lose this precious resource.

In response to this crisis, the Virginia Department of Game and Inland Fisheries (VDGIF) has developed a Wildlife Action Plan to safeguard our wildlife. Created with the help of governmental agencies, scientists, sportsmen, business leaders and private citizens working together, the plan is a call to action for each and every Virginian.

VIRGINIA'S WILDLIFE ACTION PLAN

A Smart Investment: Conserve Common Species Now Before They Become Endangered

Because lack of funding is one of the biggest obstacles to wildlife conservation nationwide, Congress agreed to provide support, through the State Wildlife Grants Program, for states that developed a Wildlife Action Plan. In response, the VDGIF created an Action Plan that addresses many challenges to conserving our wildlife.

The primary goal of Virginia's Wildlife Action Plan is to keep common species common and prevent them from becoming endangered, while



©Joe McDonald

VIRGINIA'S WILDLIFE SPECIES OF GREATEST CONSERVATION NEED

Wildlife	Total Species in VA	Species of Concern
Mammals	85	24
Birds	374	96
Amphibians	74	32
Reptiles	61	28
Fishes	210	97
Freshwater mussels	89	73
Crustaceans	10,000+	61
Aquatic insects and other invertebrates	10,000+	158
Terrestrial insects and other invertebrates	10,000+	340

restoring those on the brink of extinction.

But the Plan also serves as a coordinated, driving force for all wildlife conservation efforts across Virginia, creating new public and private partnerships at the community and state levels. Perhaps most important, it offers all Virginians the opportunity to participate on a daily basis in helping to protect our wildlife heritage.

THE PLAN IDENTIFIES:

➤ **Wildlife of greatest conservation need**—925 species including birds, mammals, reptiles, amphibians, fish, and invertebrates.

➤ **Key habitats on which they depend**—Caves, vernal pools, high elevation forests, coastal marshes, barrier islands and others. The Tennessee River drainage in southwest Virginia contains many of our most threatened aquatic species.

➤ **Threats to wildlife**—Loss of habitat to development; pollutants and

sediments that damage air and water quality and habitats.

➤ **Actions**—Steps that all citizens can take to prevent and to reverse dangerous trends.

The Virginia Wildlife Action Plan is designed for people as well as wildlife. Our quality of life is directly tied to the same air, water and land resources used by our wildlife. Ultimately, it makes good financial sense to invest now in safeguarding habitats to protect wildlife rather than paying later to restore and protect endangered species.



©Rob & Ann Simpson

VIRGINIA'S ECOREGIONS

Six Stunning Wildscapes

...Heaven and earth never agreed better to frame a place for man's habitation. Here are mountains, hills, plaines, valleyes, rivers, and brookes, all running into a faire Bay, compassed but for the mouth, with fruitful and delightsome land.

Captain John Smith

And John Smith saw only part of Virginia! The Commonwealth has six ecoregions, each with its own distinct habitat, wildlife and challenges.

Be Wild!

VIRGINIA'S

Six Stunning Ecoregions

A

SOUTHERN CUMBERLANDS

In the southwestern corner of Virginia is the Commonwealth's smallest region, home to 35,000 people and comprised of parallel mountains and valleys covered primarily by forests.

The Clinch, Powell and Holston rivers, which flow through this area, form part of the Tennessee-Cumberland freshwater ecoregion, an area globally important because of its biological diversity. These rivers contain fish, mussels and crayfish found in few other places. Here aquatic animals face poor water quality and quantity from dams and pollution by mining, oil and gas drilling, certain agricultural practices, and toxic spills. Enforcement of water quality regulations, as well as the upgrading of sewage treatment plants and reclamation of mine lands will help conserve this region.

B

NORTHERN CUMBERLANDS

Erosion of the Northern Cumberlands ecoregion has exposed horizontal rock layers creating stunning hills and valleys, among them the breathtakingly beautiful Breaks Interstate Park, known as "Grand Canyon of the East." With fewer than 97,000 people, the Northern Cumberlands has the lowest population density of any of the six regions. Forested mountains cover most of the area, the site of heavy coal mining activity, as well as important homes for unique cave-dwellers like the Indiana bat. These bats winter here in only a few caves. Human activities threaten their hibernating sites and riparian forests that support and feed their maternity colonies. Protecting these areas is critical to their survival. Protection of nesting sites and reduction of pesticides are vital to the continued recovery of the peregrine falcon.

C

NORTHERN RIDGE AND VALLEY

This ecoregion, home to some 850,000 people, contains most of Virginia's high elevation areas. More than 40 percent of the species of greatest conservation need identified in the Plan reside here. Erosion of ancient limestone has formed extensive underground caves, such as Luray Caverns, that support unusual cave-dwelling animals. Natural springs provide areas for invertebrates found only here, together with other rare aquatic species.

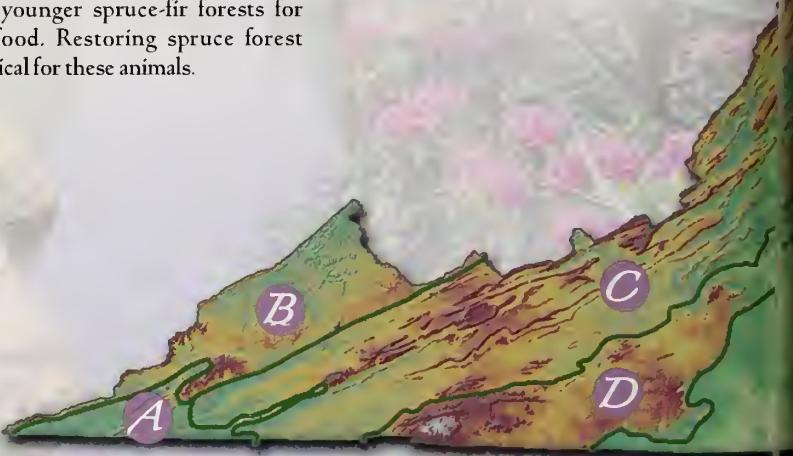
Found only in the old-growth spruce-fir forests of Highland County and neighboring West Virginia, the nocturnal Virginia northern flying squirrel is threatened by its rival, the southern flying squirrel, and by habitat loss resulting from insect infestation and increased development. Other rare species depend upon younger spruce-fir forests for cover and food. Restoring spruce forest health is critical for these animals.

D

BLUE RIDGE MOUNTAINS

The highest peaks in Virginia are here. The Appalachian Trail and Skyline Drive also cross this region, drawing many visitors. Only 360,000 people live here, but wildlife faces constant stress on habitat, water and air quality from increasing development and tourism. Protection of the forested flyway corridor for migratory raptors and songbirds is a priority.

Steep rocky slopes of the Blue Ridge are the only home in the world to the unique Shenandoah salamander. Protecting high-elevation spruce-fir forests from invasive insects and fragmentation also safeguards habitats for the red crossbill bird and other seed-eating animals. These and other animals need uninterrupted forests to survive.



Be Wild!



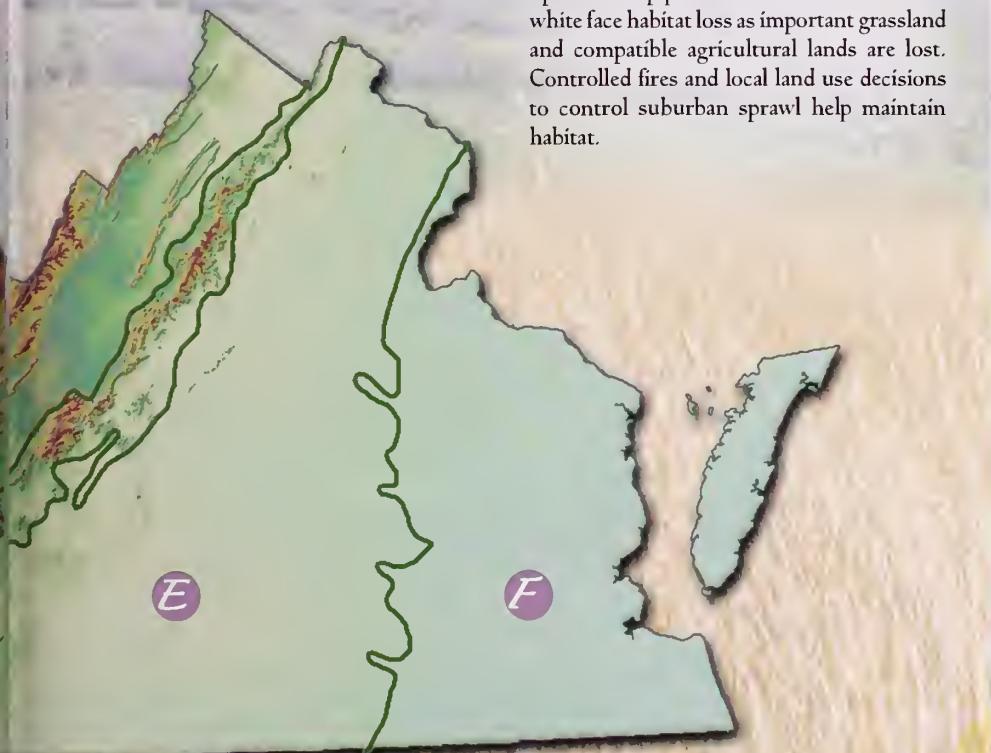
COREGIONS

Wildscapes

E

SOUTHERN APPALACHIAN PIEDMONT

Once mountainous, the Piedmont has eroded into a plateau that stretches from the Coastal Plain to the Blue Ridge. The Piedmont as the most populated region contains 3 million, or 45 percent, of Virginia's people in just 39 percent of its land.



Wild!

Grow Wild!



F

MID-ATLANTIC COASTAL PLAIN

Enforcement of wildlife possession laws and partnerships with landowners to maintain wetland buffers and riverbank habitat help to protect the wood turtle and other declining aquatic wetland species.

The Piedmont is home to declining grassland-dependent birds. Many sparrows, upland sandpipers and even northern bobwhite face habitat loss as important grassland and compatible agricultural lands are lost. Controlled fires and local land use decisions to control suburban sprawl help maintain habitat.

From the Atlantic Ocean and Chesapeake Bay on the east to the Piedmont on the west, this flat region includes wetlands, open areas, farm land and forests. Even with over two million people, it contains an extraordinary variety of wildlife. Thousands of salt and fresh water species inhabit the waters of this region, including sea turtles, dolphins and whales, sturgeon and many other coastal species. The Coastal Plain serves as a critical stopover for migrating birds from North and South America. Threats to these birds include loss of forest habitat, as well as food for "refueling."

A unique group of species dependent upon the coast are the beach nesting birds, including piping plover, American oystercatcher, black skimmer and terns. These birds scrape nests on the beach and are easily disturbed by human contact and are vulnerable to predation. Conservation includes limiting contact with humans during the critical nesting season and restoring predator-free habitat.

For more details on species of conservation need in these ecoregions, call or visit us online at :

www.BewildVirginia.org
804-367-4335

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©Tommy Thompson



common yellowthroat ©Ann & Rob Simpson

Putting Action in

Keeping It Wild in Tidewater

Although conserving our wildlife may sometimes seem like an uphill battle, it can be done. In addition to the return of the bald eagle and the white-tailed deer, Virginians have many more successes to celebrate.



Zapping the Zebra Mussel: Good-bye and Good Riddance

With the eradication of zebra mussels from an abandoned quarry in Prince William County, Virginia, has done what no other state in the nation has been able to do—eliminate this notoriously invasive species from a large, open body of water. Until 2002, when zebra mussels were discovered in Millbrook Quarry, there were no populations of this highly noxious species in the state. Had the mussels escaped from the quarry, they would have cost millions of dollars annually to control and potentially wiped out native mussels.

With its recent purchase of the 3,800-acre Cavalier property in Chesapeake, the VDGIF has protected important coastal habitats of a variety of wildlife identified in Virginia's Wildlife Action Plan. The property provides coastal, forested habitats for a wide range of wildlife, including migratory songbirds, rare amphibians and reptiles such as the canebrake rattlesnake. Its close proximity to the Great Dismal Swamp National Wildlife Refuge and other conservation lands builds green corridors and reduces habitat fragmentation.



orange sulphur ©Gregory J. Peters



eastern spadefoot ©Ann & Rob Simpson

Live Wild!



rose-breasted grosbeak ©Ann & Rob Simpson

white owl ©Ann & Rob Simpson

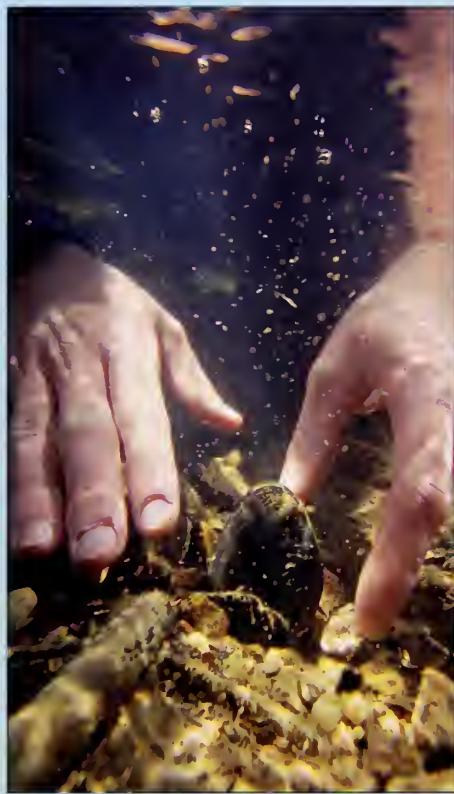
The Action Plan



green damselfly ©Vickie Shafer



endangered mussels ©Lynda Richardson



Eastern Hellbender ©Lynda Richardson

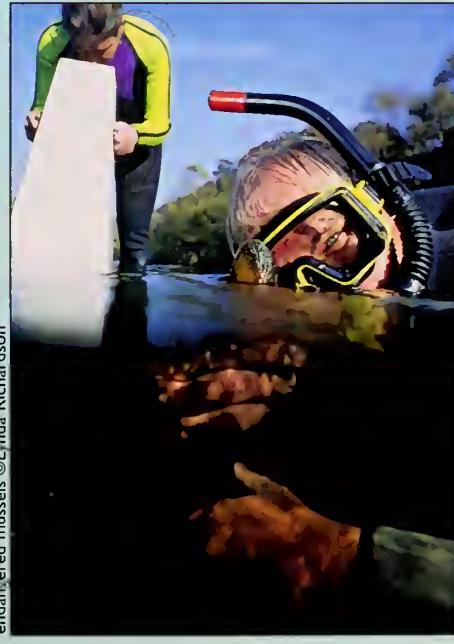


water boatman ©Lynda Richardson

Mussel Building in Southwest Virginia

The Powell, Clinch and Holston rivers of Southwest Virginia contain more rare and endangered mussels than anywhere else in the U.S. Pollution and poor water quality have caused drastic declines in mussel populations. To restore these diverse mussel populations, VDGIF is growing freshwater mussels at its Aquatic Wildlife Conservation Center in Marion, Virginia. Almost a million mussels have been produced since 1998. Mussels grown at the facility are placed into rivers to boost declining wild populations, which serve as living filters to improve water quality.

endangered mussels ©Lynda Richardson



Landowners Safeguard Species

Through federal and state grant programs, landowners now have financial and technical support to implement best management practices, such as fencing cattle from streams, stabilizing damaged stream banks, and planting eroded slopes. These steps restore the stream's natural function, reduce sediment and harmful nutrients, and improve water quality for rare mussels, fish, and amphibians in the Tennessee, Roanoke and James drainages.

For more details on these and other conservation efforts, visit:

www.BeWildVirginia.org



shiny softshell ©Ann & Rob Simpson

Clinch river crayfish

Grow Wild!

Be Wild, Virginia! Make a Difference!

Be wild:

Be a role model by setting a good environmental example. You may know more about Virginia's Wildlife Action Plan than many in your community, so tell your neighbors.

Live wild:

Recycle. Turn off lights when not in use and water lawns only when necessary. Limit fertilizers, herbicides and pesticides that are unfriendly to the earth. Use native plants in your yard; they require less water and fewer chemicals.

Grow wild:

Insist upon smart growth and responsible, planned development in your community that limits loss of wildlife habitat to a minimum. Support open space initiatives.

Think wild:

Get to know Virginia's Wildlife Action Plan, especially for your ecoregion. Keep these objectives in mind

and evaluate how the things you do affect wildlife.

Vote wild:

Support clean air and water programs. Attend meetings of your Board of Supervisors, planning and zoning boards, etc., and ask to see wildlife conservation plans and agendas. Let your local and state-wide elected officials know that this is an important concern for you.

Lead wild:

As a decision-maker, elected or appointed official, support wildlife-friendly initiatives.

Buy wild:

Buy recycled and environmentally-friendly products. Reduce the use of packaging and plastics.

Go wild:

Beginning in your own ecoregion, visit a different state park, forest or wildlife management area each month. Travel

the Virginia Wildlife and Birding Trail in the next year.

Travel wild:

Attend Virginia Department of Transportation meetings and ask to see wildlife considerations in their plans. When driving watch for wildlife, and slow down for animals on or near the road.

Teach wild:

Ask for Project Wild or Project Learning Tree in your school. Children who learn to appreciate wildlife are more likely to protect our wildlife heritage as adults.

Join wild:

Become a member of our team and let your voice be heard. Support increased funding for wildlife conservation.

To read the entire contents of Virginia's Wildlife Action Plan and to learn more about what you can do visit:

www.BewildVirginia.org



right: photo ©Dwight Dyke, background photo © Vickie Shuler

The Department of Game and Inland Fisheries shall afford to all persons an equal access to Department programs and facilities without regard to race, color, national origin, disability, sex or age. If you believe that you have been discriminated against in any program, activity or facility, please write to: Virginia Department of Game and Inland Fisheries, Attn: Compliance Officer, 4010 West Broad Street, PO Box 11104, Richmond, VA 23230-1104.



Speaking of the red fox, many people do not realize that only the gray fox is truly native to Virginia. While the red fox is native to North America, predominantly across Canada and throughout the Rockies, it was not known to exist in the Southeast U.S. at the time of Jamestown. Native Americans of the time claim there were no red fox before the "coming of the white man." It is known that fox hunting Englishmen brought many from Europe and found they bred well here. There are also several records of northern red fox being brought to the Southeastern U.S. It is assumed at this point that the red fox we have today, and which occurs nearly statewide (at least since the early 1950s), is some combination of these two introductions.

Other species that have appeared since Colonial times include the European starling, house finch, the rock pigeon (originally a farm animal), feral hogs, nutria, wild horses, sika deer and black-tailed jackrabbits. The latter two exist only on the Eastern Shore and were introduced for hunting. Continuous shipping back and forth between Europe eventually brought the Norway rat and the house mouse to the New World. The gypsy moth would be one of the most destructive species brought over, while the honey bee was a very beneficial introduction.

The early settlers also commented on the less well-known life around the Chesapeake Bay. Wood-pigeons (passenger pigeons) and parakitoes (Carolina parakeet) were seen in many areas and killed by the thousands. Strachey commented on the passenger pigeon, "...if I should express what extended flockes and how many Thousands in one flock I have seen in one day wondring at their flight, when like so many thickned Clowdes...." Both of these species were last seen in the wild between 1900 and 1920. Partridges (northern bobwhite or quail) were also found in Virginia, though probably not in the abundance that they would later achieve as farming cleared the

white-tailed deer ©John R. Ford



forests. As forests are now reclaiming farmland, the loss of habitat, and changing farming practices have significantly reduced quail populations. They are now perhaps closer to what populations were at the time of Jamestown.

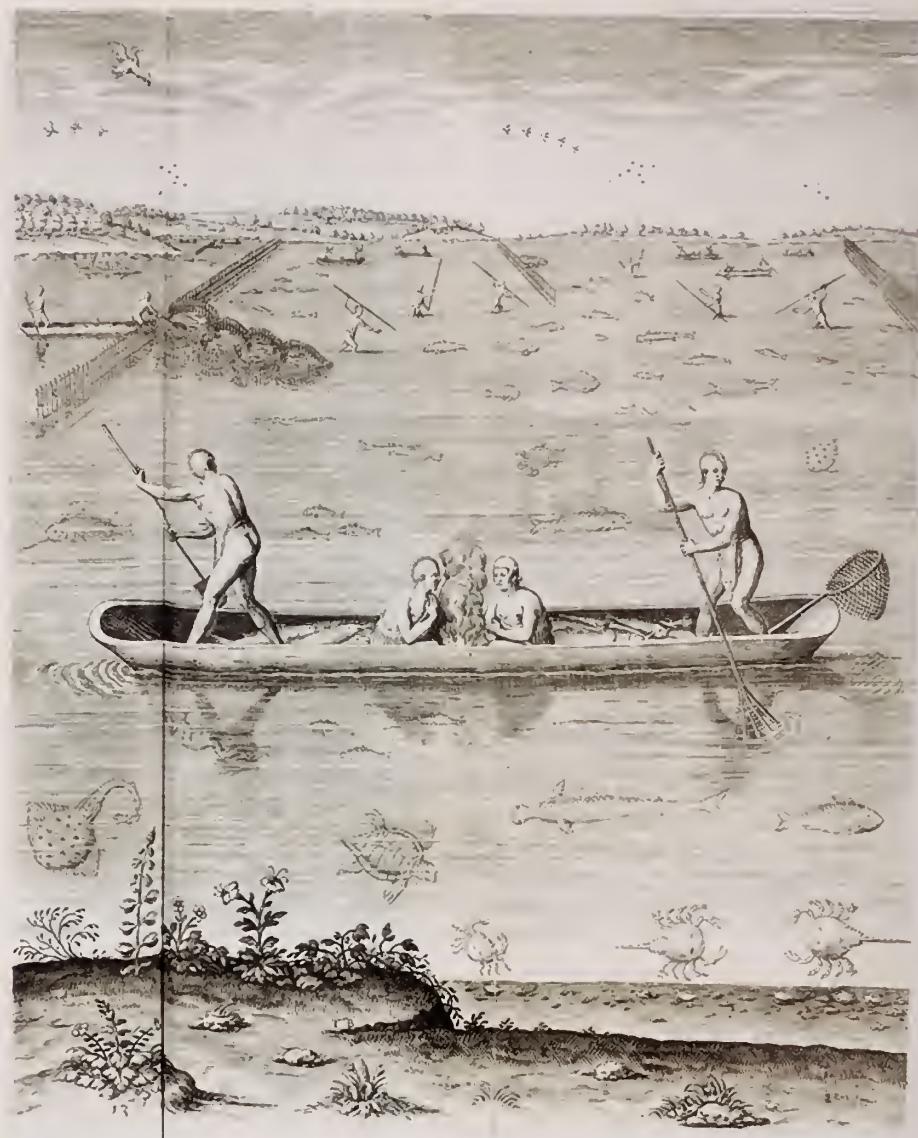
With regard to the Bay, many things have changed. Sturgeon were numerous and considered a seasonal catch, coming in May and remaining in the Bay through August. Other fish that were found in abundance were

grampus, stingrays, mullets, rock fish, sole, eels, lampreys, perch of three types, shrimp and crayfish. Gar were considered an oddity for the Europeans. Strachey described them as, "...a yard long, rownd like an Eele and as big as a Mans Leg, having a Snowt full of Sharpe teeth." Two types of crab were listed, "the king Crabb, ...came ashore a dozen at a thyme hanging one upon another's tayle, they are a Foote in length and half a foote in breadth, having many

legs and a long tayle, the Indians seldome eate of this kind;" describing the horseshoe crab. The other was the blue crab which was apparently quite abundant even into the tidal rivers. The big find was the great banks of oysters. Some were described as 13 inches long and they were particularly good hung 'upon strings...in the smoke' and preserved for the year.

An interesting point here, they have recently made a movie about Jamestown and in one of the scenes they wanted to show the settlers and Indians fishing with spears, so they were going to net off an area, just off camera and film them fishing. The hitch came when they wanted to be accurate about what they caught. If you net off an area in Virginia these days you would probably have some small shad (which are protected), catfish, bass, carp, etc. none of which occurred in the James River at the time of Jamestown. There was really nothing during last summer that they could round up and spear that was in the river at the time of the first landing.

Thomas Jefferson may have been the first "American" to discuss climate change. Beginning in 1770, when he moved into Monticello, Jefferson kept detailed records of the weather and climate at Monticello. He further compared these to observations from "Williamsburg" to come up with the first summations of Virginia's climate. In addition, he developed the first "average temperature and precipitation" charts for Virginia by combining observations from Monticello and Williamsburg and then averaging them out by day and month. Jefferson was also one of the first to recognize that as you increased in altitude, the temperature decreased. He noted as you crossed the Alleghany Mountains the tem-



Courtesy of the John Carter Brown Library at Brown University



©John R. Ford

Northern bobwhite quail populations peaked during the late 1800s. As farming methods changed and development increased, their numbers have slowly declined throughout much of the Old Dominion.

perature decreased as you approached the crest, but then began to increase as you descended the other side.

One interesting quote from Jefferson bodes to the future:

*T*he Eastern and South-eastern breezes come on generally in the afternoon. They have advanced into the country very sensibly with the memory of the people now living. They formerly did not penetrate much above Williamsburgh. They are now frequent in Richmond, and every now and then reach the mountains. They deposit most of their moisture however before they get that far. As the lands become more cleared, it is probable they will extend still further westward.

Jefferson also described some of the harshest winters during Colonial times. In 1780, "the Chesapeake bay was solid, from its head to the mouth of the Patowmac. At Annapolis, where it is 5 1/4 miles over between the nearest points of land, the ice was from 5-7 inches thick quite across, so that loaded carriages went over on it." And it reached 16 degrees below zero during the winter of 1776 in Williamsburg and was so cold the York River froze over to a point people could walk across it.

Jefferson noted:

A change in our climate however is taking place very sensibly. Both heats and colds become much more moderate with the memory of even of the middle-aged. Snows are less frequent and less deep. They do not often lie, below the mountains, more than one, two or three days, and very rarely a week. They are remembered to have been formerly frequent, deep and of long continuance. The elderly inform me the earth used to be covered with snow about three months in every year. The rivers, which then seldom failed to freeze over in the course of the winter, scarcely ever do so now.

So it is clear that climate cycles have been taking place at least for the past 400 years that we can document. Whether they were attributable to landscape changes, as Jefferson seems to allude to, is another question.

The landscape of the Commonwealth has gone through massive changes as Jefferson alludes to. When the first settlers landed the landscape was covered in trees. Strachey mentions that:

*T*hus yt appeareth that this Country affordeth many excellent vegetabells and living Creatures, yet I must say true, of grasse for the present, there is little or none but what groweth in low Marrishes, for all the country is overshadowed with Trees, whose dropping continually turneth grasse to weedes, by reason of the ranckness of the ground, which would soone be amended by good husbandry.

Over time, the trees were cleared for houses and farmland and by the late 1800s and early 1900s the forests had been cutover, erosion was filling Virginia's rivers with silt, wildfires were common, and the lands of the southern Appalachians of Virginia had become known as the "Land Nobody Wanted." The creation of the George Washington National Forest in 1917 and the Jefferson National Forest in 1936 set the stage for the reforestation and sustainable use the natural resources of western Virginia. This pattern of restoration work continued for the next 50 years until World War II. With the advent of the automobile and the interstate highway system, Virginia once again was on the grow and changing. Populations began moving away from farm communities and suburbs began to spring up around major cities. Today this pattern has completely enveloped most of northern and southeastern Virginia, as well as large areas around Richmond, Lynchburg, Danville, Harrisonburg, Winchester, Bristol, Staunton and Roanoke.

With change, came adaptation. Generalist species, such as opossum, raccoon, gray squirrel, skunk, coyote and white-tailed deer readily adapted to suburban neighborhoods. As a result, their populations have increased. Species such as northern cardinal have actually expanded their ranges because of suburban neighborhoods and people actively feeding birds. Other species, especially

specialists, continue to decline due to changing environments and decreasing habitats. Northern flying squirrel and snowshoe hare, tied to the remnant high altitude northern forests of western Virginia, continue to decline as those forests continue to die off from acid deposition and other factors.

Wildlife can be incredibly adaptable. Red-tailed hawks now nest in downtown New York City on Fifth Avenue and hunt pigeons in Central Park. White-tailed deer roam suburban neighborhoods. Coyotes hunt house cats and bears and eagles rummage through landfills for an easy meal. As humans change the landscape, some species change with us. Others however, cannot adapt and as a result, disappear from the environment. Some we have successfully (and some would say too successfully) reintroduced. Others met with new obstacles and do not exist in the Commonwealth today. Virginia today is continually challenged with new species moving in or is pressured to bring new species in for wildlife viewing, hunting or a multitude of other reasons. It is a safe bet that there will be at least as many changes over the next 400 years as there have been since Jamestown. □

Jeff Trollinger is the Watchable Wildlife Program Manager for the Virginia Department of Game and Inland Fisheries.





A Piedmont Gem

Can you keep a secret?

There is a little-known angling oasis called Motts Run Reservoir just waiting for you to wet a line.

by Mark Fike

Imagine a warm summer day sprawled across the bench seat of a johnboat under the welcoming shady reach of a drooping tree branch at the back of a cove of a reservoir. The only sounds you hear are birds tweeting, squirrels chattering and the far off scream of a hawk. There are no loud motorboats or jet

skis disrupting the peace. The moment is so tranquil that you almost do not want to get up from your sleepy perch to pick up your rod.

The fiery orange float that marked the location of your jumbo minnow just disappeared after doing a frantic jig at the end of your line. As you take up the slack and set the hook, your rod creaks a bit under the strain of what appears to be the dis-





tinctive torpedo shape of a northern pike making a run to the depths of the cove pulling the johnboat with it.

The scene may seem like a dream but it can be a dream come true not far from the crowded highways of Northern Virginia. Why imagine such an experience when you can have one for yourself? There are a few really great places left where the tranquility is unrivaled and the drive still quite acceptable from much of the Northern Virginia metropolitan area.

Motts Run Reservoir is a 160-acre impoundment that opened in 1974 to the public. The waterway is currently the source of drinking water supply for Fredericksburg and Spotsylvania

Motts Run Reservoir offers excellent water access. There are numerous fishing piers complete with fish structure nearby for anglers. Motts Run does not permit outboard motors, so it is a perfect place to paddle a canoe or kayak. Right: Dickie Musselman, president of Weekend Bassers, shows off a fine largemouth bass, one of the many fish species that lurk in the depths of Motts Run.

County. Since its opening 33 years ago, the reservoir has served as a favorite destination for anglers and people wanting a quiet place to canoe or kayak.

It is no wonder that many anglers favor its waters. An assortment of game fish can be found in its many coves and varying depths. Northern pike (the state record was caught here in 1994), largemouth bass, shellcracker, channel catfish, yellow perch, crappie, white perch, bluegill and even walleye thrive in the waters and entice anglers at Motts. Smallmouth bass are also present in small numbers.

Motts Run Reservoir is seeing a few more anglers than it had in previous years, thanks in a large part to the great park management skills of Don Minor and the fisheries management of John Odenkirk and his fellow biologists with Virginia Department of Game and Inland Fisheries.

Odenkirk pointed out that Motts Run is not only a great place to visit but a great fishery too.

"The largemouth fishery is known for average abundance but above average size structure. In fact, Motts consistently produces many of the largest (heaviest) fish seen in our surveys. One year, we had three citation bass (by weight) in one sample. That is extraordinary. This may be due, in part, to the high percentage of

Florida alleles in this population. The catfish and bream fisheries are also above average."

Crappie anglers do extremely well at Motts. It is not uncommon for anglers to fish brush piles and the numerous coves and come back with a limit of hand-sized specks.

The catfish population is in great shape at Motts as well. Odenkirk pointed out that the stocking rate at Motts is lower than what some other impoundments may receive but the catch and growth rates of channel catfish at Motts are very high. In fact, a number of anglers are regulars at Motts and they come for the great catfish angling. Don Elliot makes his way to Motts each week and always has a stringer of eating size catfish to share with fellow anglers after venturing out on the water. Turkey Run, Mine Run and the dam are popular spots to catch Mr. Whiskers.

Minor recognized that catfish are very popular with the anglers and he began a night fishing event that targets catfish at Motts during the summer on Fridays several times a month. The event is not a sanctioned tournament but an informal event that allows fellow catfishermen and women to enjoy the beauty of night fishing in a safe and well-managed location.

As you can see, Don Minor and his crew of enthusiastic attendants





©Mark File

are knowledgeable about the fishing at Motts. Minor has worked at Motts for many years and has seen it grow from a well kept secret to a flourishing location that offers anglers and nature lovers a variety of "escapes" from the mainstream of society.

Minor said, "Motts can be a tough place to fish due to the structure of the reservoir and the steep sides but it is a beautiful place and the fishing is great once you get to know the reservoir."

Dickie Musselman and his fishing club, the Weekend Bassers have worked hard to promote fishing among youth that visit Motts. The

Ben Chalekl holds up a nice bream he caught from a pier during the Kid's Fishing Derby. Thanks to many volunteers, such as the Weekend Bassers, several hundred kids gather each year for an opportunity to fish the derby.

Kids Fishing Derby is a popular event that drew over 200 youth this past June. A number of volunteers to include law enforcement, educators, construction workers and retirees all gave up their Saturday to make the event special for the kids. Musselman and his club work hard to keep anglers happy at Motts by helping

Minor manage the concession. They also put in fish attractors that are marked by buoys and GPS coordinates on a park-supplied map. The group is very willing to offer tips to anglers, especially the ones with small hands and big smiles.

In addition to fishing, the reservoir has an education center offering a place for young people to learn about nature. Linda Bailey is the nature specialist at Motts and has a beautiful log building full of specimens that she uses to educate young people at her mini camps about nature. Her displays include a snake skeleton, mounts of owls and other birds, insect displays and other collections of great natural species found in the outdoors. Her classes are available for kids of all ages and are the envy of similar programs around the state. She teaches children classes ranging from orienteering to wilderness first aid. Her summer camps include a Wildwood Nature Day Camp for 1st through 3rd graders, a Camp Hideaway for kindergarteners which allows the youngsters to explore the shoreline, do arts and crafts and meet new friends, a Teen Adventure Camp for 7th through 9th graders which includes orienteering, canoeing, fire building, and tubing and a Survivor Camp for ages 11-15. The Survivor Camp challenges young people to be mentally and physically fit in the water, air and on the ground. Rock climbing, canoeing, ropes and team-building exercises are the highlight of this course.



©Mark File



Anglers young and old enjoy fishing from the piers, while other guests explore the Nature Center. With its central location to Fredericksburg and Northern Virginia, Motts Run Reservoir is not only an excellent angling destination, but a great place to visit and learn more about nature and the outdoors.

Visitors to Motts will find a number of amenities to help them enjoy their stay. The reservoir has a concession stand that includes some bait, tackle, snacks and drinks. There are three really nice piers that include a wheelchair accessible pier built by the Fredericksburg Parks and Recreation. These piers are great places to fish. Anglers are constantly hauling in nice catches from these new structures.

As noted above there is a nature center, four miles of trails to hike, canoe and johnboat rentals with or without electric motors. There is plenty of bank fishing access at Motts. The concession charges are very reasonable for both residents and non-residents of the county. The reservoir serves as a source of drinking water for Fredericksburg, and therefore, no gas motors are permitted at Motts. Swimming, camping, fires, or alcohol are not permitted at Motts.

The reservoir is truly a location where one can take their family and not be concerned about what they will encounter. If you have been looking for a pristine location to fish, canoe, kayak, hike, cook out on the grill or just have a picnic Motts is the



place. The fishing is fine and the scenery is spectacular. Bring your camera and a lunch and enjoy! □

Mark Fike is a King George native and a former Marine who is now a teacher. His writing and photography appears in publications nationwide. Although he can be found pursuing a variety of species while hunting and fishing, he can most often be found fishing for bream in a small backwater or hunting squirrels off the beaten path.

More Information

Motts is open daily April through October from 6:00 a.m. to sunset. For more information about Motts call the concession stand at 540-786-8989, the Nature Center at 540-372-1086 ext. 213 or direct fisheries related questions to VDGIF at 540-899-4169.



MATHEWS COUNTY



Meet Vi



“Meet Virginia” as we travel throughout the Old Dominion on a series of picture perfect adventures.

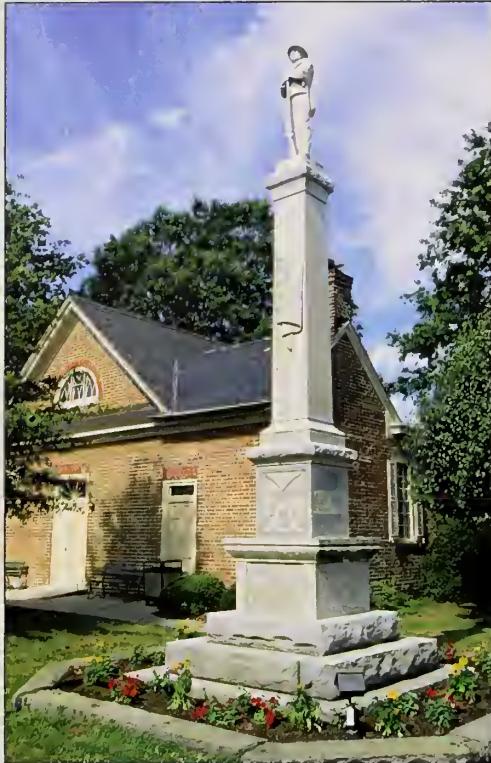
story by Megan McKinley
photos ©Dwight Dyke

Every six hours the water pushes in, sending crabs scurrying quickly to the sanctuary of their holes and snails sliding slowly up the stems of marsh grass. Driftwood that had just begun to get comfortable on the sandy beaches is forced back to sea again. Then, just as quickly, six hours later, as if it had a change of heart, the water turns and pulls back out again. Trout and redfish slide into position and lay in rips formed as the tide runs more rapidly from the shallow estuaries, sending shrimp and baitfish tumbling

into hungry, waiting jaws. This is the tale, not just of saltwater marshes, but of coastal living, of the gentle and steady existence of people and places that thrive near tidal water. Certainly this is the tale of Mobjack Bay and of Mathews County, Virginia.

Visitors come from all over the state to experience Mathews County and the tranquility of its slower, older ways. With the New Point Comfort and Bethel Beach Natural Area Preserves there exists a wealth of public beach along the Chesapeake and Mobjack bays as well as the East and North Piankatank rivers. Canoeists and kayakers enjoy floating slowly and quietly through the shallow waters in pursuit of rockfish or croaker, or perhaps just a close up look at a heron. Bikers appreciate access to miles of scenic and unpopulated roads, and for sailors Mathews is a paradise, as they slide around the lighthouse at New Point Comfort and find themselves in the open Chesapeake Bay.

Virginia



While the area receives thousands of visitors a year, the true heart and measure of its existence lies in the local population. Watermen still eek out a living here, harvesting crabs from the waters of the bay, holding on to a time that has come and gone in much of the country. Shopkeepers open doors with welcoming smiles, and there's always time for a "good morning" on the sidewalk from a passer-by. As long as the tide ebbs and flows in its marshes and on its beaches, Mathews will be there waiting. □

Megan McKinley graduated from the University of Georgia where she studied English and Journalism. She currently works as Director of Development for Blue Sky Fund (<http://blueskyfund.org>), a foundation dedicated to providing outdoor opportunities for inner-city kids.

For more information on visiting Mathews County, go to www.visitmathews.com or contact the Mathews County Visitor and Information Center at 877-725-4BAY.





2007 Outdoor Calendar of Events

March 3—Area Reliabbers Klub Annual Fundraiser, noon to 4:00 p.m., Nature Center in Rockwood Park, off Court-house Rd. near Route 360. For more information call 598-8380 or go online at www.welcome.to/arkva.

March 10-11 and March 17-18: *Highland Maple Festival*, Highland County. For more information call 540-468-2550 or go online at www.highland-county.org.

April 14-May 5 and May 7-May 19: Spring Gobbler season. □



by Beth Hester

Duck Hunting on Currituck Sound
by Travis Morris
2006 The History Press
www.historypress.net

"Duck hunting has been a way of life for me, as it has with a lot of old Currituckers. I've known men at the Ford plant in Norfolk, Virginia, who took their vacations during hunting season just so they could guide sportsmen. It's not so much money as it is a way of life."

—Travis Morris

Well, the venerable Ford manufacturing plant in Norfolk may be on the way out, but some bastions of tradition manage to muddle along in our rapidly changing environment. Duck hunting is one of those traditions. Those of us who are fortunate enough to live in one of the mid-At-

lantic states realize the significance of our coastal regions, those areas of estuaries, sounds, meandering creeks and long stretches of barrier island; little pockets of habitat heaven. These areas have provided generations of waterfowlers with a variety of hunting opportunities, and to the delight of quackheads near and far, some native hunters have temporarily put down the gun, to take up the pen.

At first glance, "The Piney Island Dove Hunt-Turned Turkey Massacre" might sound like the title of an old Arlo Guthrie song, but it's one of the 23 heartfelt narratives written by Travis Morris over a 30 year period. Morris, an ex-Coast Guardsman, and the founder of Currituck Realty, has been involved in hunting the Currituck Sound since 1938, and *Duck Hunting on Currituck Sound*, is a significant contribution to regional waterfowling literature.

Morris is not a professional writer. He is a regular Joe, who in passing down his love of the outdoors to his children and grandchildren, continues the age-old art of general store, pot bellied stove-style story telling. These are accounts of hunting characters, skiffs, rigs, hunt clubs, family and...one very "special" dish of barbecue. If you took the essence of these stories and bottled it up, it would smell like salt spray, early morning fog, wet dogs, smoke and damp waders...the duck hunter's cologne of choice.

A Writer's Voice: The Collected Work of 20th Century Biologist and Conservationist, Joseph P. Linduska
Louise E. Dove, editor
2006 The University of Delaware Press

To whom much is given, much is expected; but how many of us, however humble our resources, decide to

make the most of them, to leave behind some sort of positive legacy for future generations? The Delmarva region is a precious gift, and *A Writer's Voice* is a testament to one man's devotion to his home in particular, and to the planet at large. This volume is his bequest.

Joseph P. Linduska, who died in 1993, wrote for the *Kent County News*, beginning with the column "Bag and Creel." He later contributed to the editorial page, focusing on environmental issues and the ethics of conservation. These collected writings cover the period from 1986 to 1993, and prefigure our current debates over oil drilling, overpopulation and global warming.

Though his subjects are most often of a serious nature, (he applauds the regulations banning lead shot for waterfowling, stating his belief that the end result would be as rewarding for waterfowl as the elimination of DDT was for many raptors), he has a distinctive sense of humor, and deft use of satire that can pump healthy new marrow into the most jaded of funny bones. Linduska's great literary gift was to educate and engage the reader via his uniquely springy prose style, and lack of didacticism. □



VIRGINIA WILDLIFE

OUTDOOR CATALOG



2006 Limited Edition Virginia Wildlife Collector's Knife

This year's knife has been customized for us by Buck Knives. Each knife is individually serial numbered, and comes with a distinctive rosewood handle and gold lettering. This year's knife also includes two white-tailed deer etched on the blade. This custom knife not only comes with a leather sheath, but also a custom made solid, cherry box with a decorative wildlife scene engraved on the cover.

Item #VW-406

\$85.00 each



VW-114

VW-112

VW-120

Virginia Wildlife Caps

Our caps feature three unique designs. Each cap is 100% cotton, size adjustable and embroidered with the Virginia Wildlife logo. \$11.95 each

High profile - Blaze Orange	- Item # VW-113
High profile - Camo with Black Letters	- Item # VW114
High profile - Camo with Tan Letters	- Item # VW112
High profile - Virginia Wildlife	- Item # VW120
Low profile - Virginia Wildlife	- Item # VW119

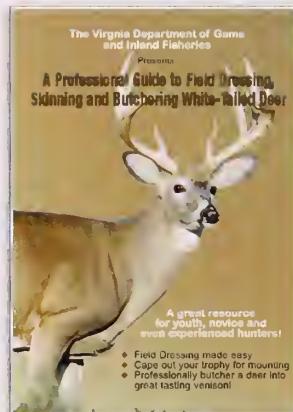


Limited Edition Collector's Plate and Stein

This collectable is titled "Winter Comfort" and is taken from an original painting by Bob Henley. Each plate and Stein is individually serial numbered and has the year of issue on the back.

Plate \$29.95 Stein \$12.00

Item #VW-5000 NOW \$29.00 for pair



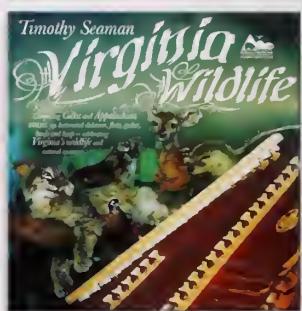
Virginia Wildlife DVD

"A Professional Guide to Field Dressing, Skinning and Butchering White-Tailed Deer."

This video was produced to give you step-by-step instructions on how to field dress a deer as demonstrated by VDGIF Wildlife Biologist Ron Hughes. Then, professional butcher and hunter education instructor Rob Bingel demonstrates the best way to cape out a deer for mounting. The video really gets good when he shows in detail how to de-bone and professionally butcher a deer using only a knife and a hacksaw.

By the end of the video you will learn how to make butterfly chops, de-bone a front shoulder, tie up a roast using a butcher's knot, be able to identify all the proper cuts of meat on a deer, and more!

Item #VW250 \$12.00 includes S&H



Virginia Wildlife Music CD

Virginia Wildlife is excited to offer a compelling and lively array of classic Celtic and Appalachian music that celebrates Virginia's wildlife and natural resources. This musical journey is composed and performed by Timothy Seaman, of Williamsburg, Va., along with guest appearances from other musical masters. (Total time 66:32 min.)

Item #VW-219 \$10.00 each

To Order

Visit the Department's Web Site at:

www.dgif.virginia.gov

Or Call (804) 367-2569

Please allow 3 to 4 weeks for delivery.

RECIPES

by Joan Cone

My First Taste of Walleye

In the summer of 1949, we were married. The only thing missing was money for a conventional honeymoon. Ours started at a Quebec ski resort with no air conditioning. My husband proposed we leave and go farther north to cool down. The road to a very large lake was unpaved. Arthur had fished it before, and there were no roads beyond. We stayed at a small French inn and rented a row boat to fish for large walleye. The fish cooperated even after we were marooned for awhile on an uninhabited island due to a thunderstorm. The inn prepared our catch very well, and a delicious meal saved the day!

Menu

- Blue Cheese Dip*
- Crunchy Oven Fried Walleye*
- Vegetable Combo*
- Molded Pineapple Salad*
- Cranberry Pecan Pie*

Blue Cheese Dip

4 ounces cream cheese, at room temperature
1 cup sour cream
4 ounces blue cheese
2 tablespoons chopped fresh chives
Freshly ground pepper to taste
Chips or crackers for serving

In a bowl, beat cream cheese on medium speed until soft and creamy. Reduce speed to low, add sour cream and beat until combined. Add blue cheese and beat until cheese is crumbled and no large lumps remain. Stir in chives and pepper. Transfer dip to small serving bowl, cover with plastic wrap and refrigerate at least 30 minutes or up to 1 week. Serve with chips or assorted crackers. Makes 2 cups.

Crunchy Oven Fried Walleye

1 to 1 1/2 pounds walleye fillets
1/4 cup flour
Salt and pepper to taste
2 egg whites
1/4 cup dried bread crumbs
1/4 cup cornmeal
1/2 teaspoon dried basil, crushed

Preheat oven to 450° F. Stir flour, salt and pepper together in a shallow dish and set aside. In a bowl, beat egg whites until white and frothy. In another bowl, combine bread crumbs with cornmeal and basil. To bread fillets, dip first into flour, shaking off any excess, then into egg whites, then into bread crumb mixture. Spray a shallow baking dish with non-stick cooking spray. Lay fillets flat in the dish, tucking under any thinner ends for more even

cooking. Bake in the preheated oven for 10 to 15 minutes or until fish flakes easily with a fork. Serves 4.

Vegetable Combo (For microwave)

1 package (16 ounces) frozen mixed vegetables
2 tablespoons butter or margarine
2 tablespoons chopped walnuts
1/4 cup real bacon pieces
3 tablespoons grated Parmesan cheese
Season to taste with pepper

Microwave vegetables as directed on package; drain. Place butter and walnuts in small microwavable bowl. Microwave on HIGH 2 minutes or until butter begins to brown, stirring after 1 minute. Add butter mixture, bacon and cheese to vegetables, toss lightly. Season to taste with pepper. Serves 4.

Molded Pineapple Salad

2 cups boiling water
2 packages (3 ounces each) orange gelatin
1 1/4 cups pineapple juice
1 can (20 ounces) pineapple chunks, drained

Empty 2 packages gelatin into medium bowl. Add 2 cups boiling water and stir for 2 minutes or until gelatin is completely dissolved. Stir in 1 1/4 cups cold pineapple juice. Refrigerate until slightly thickened. Add pineapple chunks and stir until well blended. Pour into lightly greased 6-cup mold and refrigerate 4 hours or until firm. Unmold. Makes 10 servings.

Cranberry Pecan Pie

Refrigerated Pillsbury Pie Crust for 9-inch pie plate
3 eggs
1 cup corn syrup
2/3 cup sugar
1/4 cup butter, melted
1 teaspoon vanilla
2 cups fresh cranberries
1 cup chopped pecans.

Unroll pastry and place in pie plate. Trim pastry to 1/2-inch beyond edge of plate; flute edges. In large bowl, combine eggs, corn syrup, sugar, butter and vanilla until blended. Stir in cranberries and pecans. Pour into crust. Bake in a preheated 425° F. oven for 10 minutes. Reduce heat to 350° F. and bake 35 to 40 minutes longer or until filling is almost set. Cool completely on wire rack. Cover and refrigerate overnight before slicing. Yield: 6-8 servings. □

Photo Tips

by Lynda Richardson

Photographing Winter's Wonderful Waterfowl

Last month, I talked about making a New Year's resolution to go out and photograph wildlife during the cold, winter months. This month, I want to follow that line of thought further and talk about photographing migrating waterfowl which visit some of our national wildlife refuges, state parks and state wildlife management areas.

Situated along the Atlantic flyway, Virginia is lucky to have areas known for vast numbers of migrating ducks and geese. Chincoteague National Wildlife Refuge, located near the Maryland-Virginia border on the Eastern Shore, is probably best known for the thousands of snow geese and ducks that stop over during this annual journey. At Chincoteague National Wildlife Refuge, you can easily drive your car along well maintained roads to view and photograph waterfowl. Every year on the Saturday before Thanksgiving, and the week after, roads normally closed to the public are open for a drive through. November and December are when waterfowl first arrive on their journey south and January and February are when the birds come back through heading north.

No matter when you go, always remember that you are photographing WILD animals and they will be very skittish if you get out of the car in front of them. Humans are seen as predators! Because of this, I shoot from my truck using a window mount called a "Groofwin." The Groofwin (ground-roof-window pod) was created and is sold by Leonard Lee Rue Enterprises; www.rue.com. (\$259.95) Note that you must provide your own tripod head for the Groofwin.

These sturdy window "tripods" allow you to comfortably shoot in the warmth and comfort of your car while waiting for that perfect shot.



"Shooting from my truck using a Groofwin window mount and a 500mm lens, I was able to capture snow geese taking off in the evening light during a visit to Chincoteague National Wildlife Refuge." © 2006 Lynda Richardson

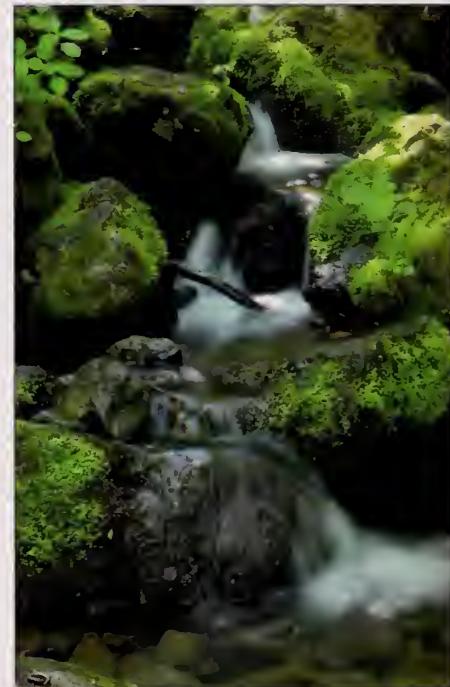
Waterfowl seem to get somewhat used to cars that travel through the refuge so your car becomes a perfect mobile blind. If you don't believe me, try getting out in front of a flock of green-winged teal and see what happens. Stay in your car and wait patiently for the best results.

If you can't afford a window mount, a rolled up jacket or sack full of sand can be substituted, but these just won't offer you the stability of a true window mount. A stable shooting platform, such as the Groofwin, also allows you to shoot at lower shutter speeds than the less stable alternative. Do remember to turn off your car while shooting!

So, this February travel out to some of our natural areas and give waterfowl photography a chance. Good luck and happy shooting! □

You are invited to submit one to five of your best photographs to "Image of the Month." Virginia Wildlife Magazine, P.O. Box 11104, 4010 West Broad Street, Richmond, VA 23230-1104. Send original slides, high quality prints, or high res jpeg files on disk and include a self addressed, stamped envelope or other shipping method for return. Also, please include any pertinent information regarding how and where you captured the images and what camera and settings you used. We look forward to seeing and sharing your work with the readers of Virginia Wildlife magazine!

Image of the Month



Congratulations go to Matthew E. Asai, of Locust Grove, for his beautiful photograph of a stream flowing through moss covered rocks. Matthew spotted this scene near Lewis Falls in Shenandoah National Park and used a tripod and a Nikon D70 digital camera to capture the image at ISO 200, 1.6 seconds at f29. Way to go Matthew!

On The Water

by Jim Crosby



Plan a Rescue This Year

Go to work now planning at least one rescue mission for this coming boating season. If you own a boat, you have an investment in the marine environment and must be committed to protecting it for yourself and the future of recreational boating.

If each boat owner in Virginia would commit to making one environmental rescue mission this boating season, we could put a huge dent in the marine debris that is accumulating in our waterways.

The accumulation of trash and other non-natural materials in our state waterways is ever increasing and is not strictly at the hands of the recreational boater.

These objects can range from cigarette butts and plastic bottles to automobile parts and industrial waste. The fact is that 80 percent of all marine debris starts out on land and is washed into the water via creeks and storm drains. "Not only is marine debris unpleasant to look at, but it can significantly harm marine life and boats. The easiest way to get rid of marine debris is to prevent it from reaching the water in the first place," said Susan Shingledecker, Environmental Program Manager for the BoatUS Foundation.

The next step is to clean it up once it arrives in our environment. We could accomplish this task to a great effect if we could organize a "Boating for the Environment" day during which each of us would devote one boat outing this coming season to

picking up and removing the unsightly debris from our own particular marine environment.

Those of us who have some leadership talent could go to work now and organize such a day among our fellow boaters through the yacht club, marina or other association of boat owners to which we belong. Think about it! A flotilla of boating friends scouring the waterway for debris could improve our marine environment tremendously. One day of "Boating for the Environment" would be a small investment in the future of beautiful, healthy and clean waterways to enjoy for a lifetime.

BoatUS thinks so and is staking some funding on the project to clean up our marine environment. Anyone who can come up with a plan can apply for funding of their project to cover the out-of-pocket expenses in organization and execution. To apply online or download an application form visit <http://www.boatus.com/foundation/cleanwater/grants/>.

Thinking about the possibilities gets me all excited. Leading a group of boaters to such an event could be the most rewarding thing one could accomplish this whole season. It could top catching the biggest fish, learning to water ski, wake board or body surf. It could be big in ones lifetime. It could lead to public recognition, awards and, most important, the respect of the entire boating community.

Think of the fun that such a fellowship could produce—everyone

committed to a single challenge to be accomplished in one single day. It could lead to a celebration dinner that could include awards for the largest volume of debris recovered, the single most unusual item found on the waterway and the most difficult recovery.

One could easily compare this to a fishing tournament, a boating rally or exhibition—all of which represent an opportunity for great fun and fellowship among boaters. Maybe we could even convince the Virginia Department of Game and Inland Fisheries to offer a statewide award for the best effort put forth in a "Boating for the Environment" project.

Now, that's my challenge to the recreational boaters of Virginia for this coming spring. Should you accept it, I would like to hear from you and offer my assistance in anyway possible—the least of which could be a picture story of the event that we could spread across Virginia.

Now is the time to begin the planning, promotion and recruitment of fellow boaters to join the effort. Make your first step to contact me at jimcrosby@adelphia.net or (434) 823-2277 with your ideas, questions and/or suggestions. I will be delighted to hear from anyone who will accept the challenge and is willing to begin the process.

Virginia is a great place to live, work and boat. Let us all work toward keeping it that way! ☐



Virginia Nongame Wildlife Program

Celebrate the 26th Anniversary of Virginia's Nongame Wildlife Program by helping to support essential research and management of Virginia's native birds, fish and other nongame animals.

If you are due a tax refund from the Commonwealth of Virginia, you can contribute to the Virginia Nongame Wildlife Program by simply marking the appropriate place on this year's tax checkoff, on the Virginia State Income Tax Form.

If you would like to make a cash donation directly to the Virginia Nongame Wildlife Program using a Visa or MasterCard, you can visit the Department's Web site or mail a check made out to: Virginia Nongame Program and mail it to Virginia Nongame Program, 4010 W. Broad St., Richmond, VA 23230-1104.

Remember, that this is the year that you can make a difference by helping to support the management of Virginia's wildlife.

Nongame Tax Checkoff Fund

For Virginia Wildlife subscription calls only 1-800-710-9369
Twelve issues for \$12.95

All other calls to (804) 367-1000
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